Department of Environmental Conservation
Response to Comments

For

Ketchikan Pulp Company Ward Cove Landfill

APDES Permit No. AK0053392

Public Noticed November 7, 2019 – December 6, 2019

January 23, 2020

Alaska Department of Environmental Conservation
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501

1 Introduction

1.1 Summary of Facility / Permit

The Ketchikan Pulp Company (KPC) owns and maintains the KPC Ward Cove Landfill located northwest of Ketchikan, AK. The landfill opened in 1988 to serve the nearby mill but is no longer used as a waste disposal site. The first waste disposal cell was closed in 1998, and the second waste disposal cell was closed in 2001. Both cells contain primarily wood waste, boiler bottom ash, and fly ash from past mill operations. Storm water discharges from the landfill flows to Refuge Cove via storm water monitoring locations SWL4 and SWL6B and to Ward Cove via storm water monitoring locations SWL11, and SWL12.

The KPC Ward Cove Landfill was originally permitted under National Pollutant Discharge Elimination System Permit AK0000922 in 1998 by the Environmental Protection Agency (EPA). The permit authorized the discharge of KPC Landfill leachate with other comingled treated wastewaters originating from the grounds of the mill. In 2004, KPC constructed a new outfall and requested separate permits for their discharges. Subsequently, in 2004, EPA issued AK0053392 for the landfill leachate. The Alaska Department of Environmental Conservation (DEC or the Department) reissued AK0053392. It expired on April 30, 2108. Under the Administrative Procedures Act and state regulations at 18 AAC 83.155(c), an Alaska Pollutant Discharge Elimination System (APDES) permit may be administratively extended provided that the permittee submit a timely and complete application for a new permit prior to the expiration of the current permit. A timely application for a new permit was submitted by KPC on October 24, 2017; therefore, the 2013 permit is administratively extended until such time a new permit is reissued.

1.2 Opportunities for Public Participation

DEC proposed to issue an APDES wastewater discharge permit for the KPC Ward Cove Landfill Leachate discharge. To ensure public, agency, local governments and tribal notification and opportunities for participation, the Department:

- identified the permit on the annual Permit Issuance Plan posted online at: http://www.dec.state.ak.us/water/wwdp/index.htm
- notified local governments and potentially affected tribes that the Department would be working on this permit via letter, fax and/or email
- posted a preliminary draft of the permit on-line for a 10-day applicant review September 18, 2019 and notified tribes and other agencies

- posted the public notice announcing a 30-day public comment period on the Department's public notice web page on November 7, 2019
- posted the proposed final permit on-line for a five-day applicant review on January 9, 2020
- sent email notifications via the APDES Program List Serve when the preliminary draft, draft, and proposed final permits were available for review

The Department received comments on behalf of KPC from Maul Foster & Alongi, Inc., an Environmental Engineering & Consulting Firm. This document summarizes these comments and the justification for any action taken or not taken by DEC in response to them. There were no other comments received during the 30-day public comment period.

1.3 Final Permit

The final permit was adopted by the Department on January 23, 2020. There were changes from the public noticed permit. Any significant changes are identified in the response to comments and reflected in the final documents.

2 Receiving Waterbody Monitoring Requirements

2.1 Comment Summary

Permit Section 1.4.

KPC states that manganese and color background data for Ward Cove is robust and that no additional data collection is necessary to establish background conditions. Additionally, KPC states that DEC collected copious amounts of temperature and salinity data in Ward Cove for temperature and salinity between 1997 and 2002. Furthermore, based on previously collected and supporting data, ammonia monitoring in the receiving water is not necessary. They believe that ammonia technology-based effluent limits (TBELs) shall continue to be applicable no matter the outcome of any further receiving water monitoring of the parameters (pH, temperature, salinity) upon which the water quality based standard is based.

Response:

In the absence of receiving waterbody monitoring data, DEC uses 15% of the most stringent water quality criteria to represent worst case conditions. If actual data is available, DEC uses the 85th percentile of the ambient monitoring data. This policy may be found in DEC's guidance, *Alaska Pollutant Discharge Elimination System (APDES) Permits Reasonable Potential Analysis (RPA) and Effluent Limits Development Guide* (June 30, 2014).

Ambient conditions affect the assimilative capacity of the receiving water, reasonable potential to exceed water quality criteria, and water-quality based effluent limits (WQBELs). The use of actual ambient monitoring data produces a more accurate reasonable potential analysis determination. The use of 15% of the water quality criteria may produce more conservative results than what may have been produced using the 85th percentile of actual data.

The color monitoring data, which was used in KPC's 2002 mixing zone application, was from 1992-2001. The color range, as indicated in KPC's Response to Comments, ranged from 0 to 55 color units, with an

average of 8.7 color units. 18 AAC 70.020(b)(13), Color, for Marine Water Uses, states that color may not exceed 15 color units or the natural background, whichever is greater. KPC states that the 1992-2001 data set was not available for review, but that the data set contained 430 samples. The 85th percentile of that data cannot; therefore, be determined.

Receiving waterbody monitoring for manganese in the 2004 and 2013 permits was required twice per permit cycle; once in the second year of the permit, once in the fourth year. While receiving waterbody monitoring results indicate low manganese concentrations, this is a small data set that was spread out over the course of two permit cycles.

Nevertheless, DEC has determined to remove manganese and color from the receiving waterbody monitoring. KPC should be cognizant that DEC will not use old receiving waterbody monitoring data in the next reasonable potential analysis, and will instead, if receiving waterbody data is not available, use 15% of the most stringent applicable water quality criteria for the reasonable potential analysis and any subsequent mixing zone modeling.

Monitoring of the receiving waterbody for ammonia is not required; however pH, temperature, and salinity, on which ammonia water quality criteria are based, are required. The 1997-2002 temperature and salinity data that KPC refers to in their comments was used in DEC's 2007 *Revised Final Total Maximum Daily Loads for Residues and Dissolved Oxygen in the Waters of Ward Cove near Ketchikan, Alaska*. This is old data and may not be representative of current ambient conditions in Ward Cove. Ammonia TBELs have been more stringent in previous permits; however circumstances upon which WQBELs are determined, such as the driving parameter in the mixing zone and the available dilution may change in the next permit reissuance. Current receiving water conditions may differ from the data collected between 1997 and 2002. These factors could lead to WQBELs that are more stringent than TBELs. Therefore, DEC has determined to maintain the receiving waterbody monitoring requirement in the permit for pH, temperature, and salinity.

3 Receiving Waterbody Monitoring Frequency

3.1 Comment Summary

Permit Section 1.4.

KPC states that the receiving waterbody monitoring frequency is an increase from the previous permit. The previous permit required monitoring in the second and the fourth year of the permit, while the proposed permit requires annual monitoring. They state that they have no convenient access to vessels to conduct representative waterbody sampling for Outfall 001A, that they only have one employee, and that they have no marine assets to draw on for the required receiving waterbody sampling. Receiving waterbody sampling, for them, they state, requires contracting with vessel operators and environmental consulting firms that have the proper equipment to perform the sampling. KPC claims that the frequency of the waterbody monitoring is a burden on a company that operates a closed landfill that will not have any new contributions.

Response:

Based on KPC's comments, DEC is reducing the receiving waterbody monitoring frequency from once per year to once during the second year of the permit and once during the fourth year of the permit for this permit reissuance. This frequency is subject to change in the next permit reissuance if DEC determines that a greater frequency is needed for the establishment of water-quality criteria and/or to protect Alaska Water Quality Standards.

4 Technology-Based Effluent Limits

4.1 Comment Summary

KPC requested that DEC consider reducing the monitoring frequency of, or excluding, ammonia, total suspended solids (TSS), and 5-day biochemical oxygen (BOD_5) in this permit or in future renewals. These limits were previously established in the permit as best professional judgment (BPJ) technology-based effluent limits (TBELs). KPC requested that DEC use the same rationale for their removal that DEC used to omit the semi-volatile compounds in the proposed permit.

Response:

The TBELs found at 40 CFR Part 445, Subpart B, RCRA Subtitle D, Non-Hazardous Waste Landfills, provide the most meaningful guidance for developing effluent limits for the leachate treatment process at the KPC Landfill. DEC used BPJ in this permit, as did EPA, in 2004, to apply the limits contained therein. Since the 2004 permit was issued and subsequently reissued in 2013, p-Cresol, ά-terpineol, phenol, and benzoic acid have never been detected in the treated landfill leachate. Although EPA acknowledged in 2004 that it was unlikely that the compounds would be present in the leachate at the KPC Landfill, there was insufficient evidence in 2004 to definitively support the absence of these compounds in the leachate as the closure of the landfill had been relatively recent. EPA; therefore, could not conclude whether leachate characteristics had stabilized. However, data collected since 2004 indicates that p-Cresol, ά-terpineol, phenol, and benzoic acid are not present in the landfill leachate; therefore, DEC used BPJ to remove these compounds in this permit.

Unlike, p-Cresol, ά-terpineol, phenol, and benzoic acid, ammonia, TSS, and BOD_5 have all been detected in the landfill leachate discharged from Outfall 001A. Although the landfill is closed, and KPC states that the landfill will not have any new contributions, DEC asserts that minimal monitoring of the landfill leachate for ammonia, TSS, and BOD_5, is necessary to ensure that the level of treatment at the facility continues to be adequate. The Draft Permit proposed annual monitoring for ammonia, and biannual monitoring for TSS and BOD_5. The BPJ TBELs for ammonia, TSS, and BOD_5, will not be removed from the permit; however, TSS and BOD_5 monitoring at Outfall 001A will be reduced to once per year. The highest TSS concentration over the last permit term was 5 mg/L (monthly average limit 27 mg/L, daily maximum limit 88 mg/L), and the highest BOD_5 concentration was 4 mg/L (monthly average limit 37 mg/L, daily maximum limit 140 mg/L). DEC will not reduce ammonia monitoring below once per year.